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ABSTRACT

The study, involving 178 Mississippi vocational education teachers working in 12 different areas of vocational education who had been teaching three years or less, compared the work values and job attitudes which vocational education teachers hold toward teaching and students. Instruments utilized for data collection were a questionnaire pertaining to teacher's perceptions of teaching preparation, the "Work Value Inventory" by Super, and a vocational teacher attitude scale (included in the appendix) developed by the investigators. A composite rating for each subject's preparation for professional work was determined in nine performance areas; ratings were correlated with teacher attitudes toward teaching and students. Teachers' perceptions of their preparation to work in the nine areas were also correlated with the work values teachers selected as important in motivating them to teaching. The results indicated that vocational teachers, as a composite group, were most highly motivated in their jobs by altruistic work values. Vocational teachers from different disciplines differed significantly in attitudes towards students. The hypothesis predicting similar work values for vocational education teachers was strongly supported. Specific study of prevocational teachers' work values was recommended. (EA)

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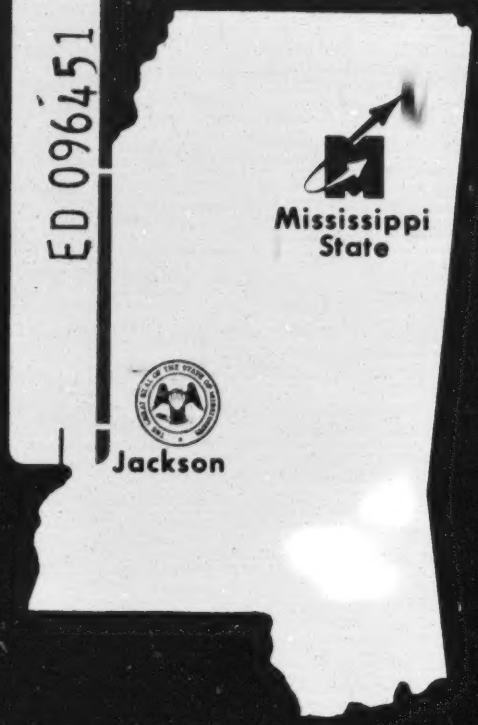

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Work Values and Job Attitudes Held by New Teachers in Vocational Education in Mississippi

Herbert M. Handley and James F. Shill

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WORK VALUES AND JOB ATTITUDES HELD BY NEW TEACHERS IN VOCATIONAL EDUCATION IN MISSISSIPPI

by

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Mississippi State University does not discriminate on the grounds of race, color, or national origin.

PREFACE

This report is the third and last in a series written by the investigators to summarize their assessment of the Preservice and Inservice Training Programs for Vocational Education Professional Personnel in the State of Mississippi.

The first report compared the perceptions of educators working in 13 service areas on their ability to execute specific performance tasks related to vocational instruction after they had finished preservice professional study.

The second report evaluated the effectiveness of inservice education programs in the State for assisting teachers in developing needed skills and in gaining knowledge.

This third report summarizes the data collected which are related to the attitudes and values held by the vocational teachers working in the different service areas. The investigators believe that a study of accountability in teacher preparation programs is not complete without a consideration of the affective behaviors exhibited by teachers. They also believe that teacher training groups, by selection and training, must assume responsibility for working with the attitudes and values of prospective teachers, as well as with their knowledge and skills. This part of the research, then, was conducted as a parallel analysis with the competency study reported in the first monograph.

This series of reports is presented to provide information that may be useful in developing insights for professional groups as they

work toward establishing competency based programs in teacher education.

Special appreciation is expressed to the graduate students who assisted in executing this last phase of the assessment. Those assisting in the project were Dean Wilson, LaVerne Lindsey, Melvin Jackson, Mary Bestor and Gary Whitehead.

The assistance of Patti Cox and Phyllis Jones is also gratefully appreciated for their typing and preparation of the final report.

H. M. H.

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I. INTRODUCTION

Since efforts to study teacher preparation in areas of vocational education with competency-based models are presently in exploratory stages, the state of the research has progressed very little beyond the assessment of teachers' ability to do specific performance tasks associated with instruction.

Combs[1], as early as 1965, in his discussion of teacher effectiveness studies formulated around competency-based systems, warned that evaluation of an individual's potential on the basis of his ability "to do" alone is a highly questionable practice. He pointed out that good teaching is a strictly personal thing and suggested that the teacher's personality, personal values and attitudes toward people interact significantly with his ability to perform specific instructional tasks in specific situations.

As a parallel undertaking in this assessment of the effectiveness of preservice preparation of vocational teachers in Mississippi, the investigators saw a need for studying the attitudes of the vocational educators toward their jobs and students, as well as the skills possessed for performing specific teaching related tasks.

That human factors make a difference in the quality of teaching is an unquestioned premise in the present state of the art.[2] Studies

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1. A. W. Combs, The Professional Education of Teachers. (Boston: Allyn and Bacon, Inc., 1965), p. 2.

2. R. F. Peck and J. A. Tucker, "Research on Teacher Education." In R. M. W. Travers, Editor, Second Handbook of Research of Teaching. (Chicago: Rand McNally & Company, 1973), p. 964.

in specific areas of vocational education, including those by Frinsko[3] in industrial education, and Crabtree[4] in home economics have shown that personal characteristics of teachers are significantly related to their teaching performance.

The relationship of professional preparation of teachers to the values and attitudes which they hold is a relatively unexplored area in vocational education. From the broad area of teacher preparation, however, Bledsoe[5], in his study of beginning teachers in Georgia, found that professionally certified teachers scored significantly higher in their attitudes toward pupils than did provisionally certified teachers. Personal characteristics of experienced industrial arts teachers, as measured by the Minnesota Vocational Interest Inventory in a study by Nelson[6] were found to be successful discriminators between groups of teachers who expressed job satisfaction and job dissatisfaction, respectively. The relationship of job satisfaction,

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3. W. Frinsko, Experimental Post-Degree Program at Wayne State Univeristy--An Analysis of Selective and Predictive Factors in Student Teaching (Doctoral Dissertation: Detroit, Michigan: Wayne State University, 1962; Abstract: Dissertation Abstracts 24: 1901 No. 5, 1963).

4. B. D. Crabtree, Predicting and Determining Effecitveness of Homemaking Teachers (Doctoral Dissertation: Ithaca, N. Y.: Cornell University, 1963; Abstract: Dissertation Abstracts 26: 6013: No. 10, 1966).

5. J. C. Bledsoe, Comparison Between Selected Characteristics and Performance of Provisionally and Professionally Certified Beginning Teachers in Georgia (Contract #OE-5-10-145, U. S. Office of Education, Dept. of Health, Education and Welfare, 1967).

6. R. G. Nelson, Personality Variables of College Students Who Signify Industrial Arts as a Major Field of Educational Preparation (Doctoral Dissertation: Greeley: Colorado State College, 1964; Abstract: Dissertation Abstracts 25: 300-301; No. 1, 1964).

work values or teacher morale to teaching effectiveness has not been established empirically. Anderson and VanDyke[7], however, assert that where teacher morale is high, student achievement is high and teaching is well done.

The Problem and Objectives

In this third phase of the Mississippi Study for Assessing the Professional Preparation of Vocational Teachers the research was concerned with determining the attitudes which the recent graduates of vocational education programs held toward their jobs and students. Another purpose of this phase of the study was to discover the relationship between these affective behaviors expressed by the teachers and their perception of the effectiveness of their preservice preparation to teach.

It was hypothesized by the investigators that vocational educators teaching in different subject areas would be similar in the work values which they held and the attitudes which they expressed toward their students and jobs since they had similar professional goals. It was further hypothesized that the teachers' perceptions of their preparation for teaching would be significantly related to selected work values and attitudes which the teachers hold toward their jobs. It was also hypothesized that the vocational teachers' perceptions of this effectiveness of their preservice training would be

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7. L. W. Anderson and L. A. VanDyke, Secondary School Administration (Boston: Houghton Mifflin Company, 1963), p. 336.

significantly related to the teachers' work values and attitudes which they held toward teaching and students.

To test these hypotheses, answers to the following questions were sought:

1. How do vocational teachers in the different areas compare in factors which motivate them in their work and in attitudes which they hold toward their teaching jobs and their students?

2. What relationship will the type of preservice education program received by vocational teachers have to the work values and attitudes which they hold toward their jobs and students?

3. Are vocational education teachers' evaluations of their preservice preparation related to their work values and to their attitudes toward students and teaching as a job?

4. How are attitudes held by vocational instructors toward their jobs and students, respectively, related to their expressed work values?

Rationale for the Study

The rationale for this study was developed around two premises: (1) that a determination of the attitudes and values which teachers hold toward their work is important criteria for teacher effectiveness and (2) that vocational teachers' evaluation of the effectiveness of their preservice preparation may be influenced by the work values and attitudes which the teachers hold toward their jobs.

A basic assumption underlying the first premise is that the attitudes which teachers hold toward their jobs and students are

directly related to teacher competence; i.e., teachers who hold more favorable attitudes toward students and who express more job satisfaction tend to promote student motivation and achievement more effectively. This assumption is supported by the work of Ryans[8], Mager[9] and Anderson[10].

The rationale for the second premise has not been so specifically established in the literature. In the first phase of the study an assessment was made of the teacher performance level for executing instructional tasks developed in preservice vocational training programs in Mississippi. The criteria for determining the effectiveness of the teacher training programs were self assessments by vocational teachers of the competencies which they held for performing specific teaching-related tasks after completion of preservice studies. Even though this method of evaluation has historical and functional precedence in teacher training programs, it has recently been criticised by McNeil and Popham[11] for the non-objectivity of the data. According to these reviewers, there is a tendency for instructors to overrate themselves; there are also negligible relationships of

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8. D. G. Ryans, Characteristics of Teachers (Washington, D. C.: American Council on Education, 1960), pp. 397-398.

9. R. F. Mager, Developing Attitudes Toward Learning (Palo Alto, California: Fearon Publishers, 1968) pp. 32-37.

10. L. W. Anderson, "Teacher Morale and Student Achievement," The Journal of Educational Research (May, 1953), pp. 693-698.

11. J. D. McNeil and W. J. Popham, "The Assessment of Teacher Competence" In R. M. W. Travers, Editor, Second Handbook of Research on Teaching (Chicago: Rand McNally & Company, 1973), pp. 231-232.

self-assessment with other criteria for evaluating teacher performance.

Studies of perception, such as that of Bruner and Goodman[12], have indicated that personal values and needs may influence or distort judgments of subjects. Subjects may tend to "see" what they value of importance from a past experience. They may also not "see" or be aware of factors which they value inconsequential in stimuli. In applying this concept to the present study, the vocational teachers, after some teaching experience, may remember their training in areas where they have since felt a need. They also may have paid more attention to the parts of their training which better reinforced their value system.

Since no studies have been located which explore relationships between teachers' perceptions of their own professional preparation and the specific values and attitudes which these teachers hold, the rationale for the second premise is truly hypothetical in the present state of evaluative techniques. It was decided that this phase of the investigation of vocational teacher preparation in Mississippi would lend an excellent opportunity to investigate this relationship between affective behaviors and evaluative criteria.

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12. J. S. Bruner and C. C. Goodman, "Value and Need as Organizing Factors in Perception," Journal of Abnormal and Social Psychology (Volume 42, 1947), pp. 33-44.

II. RESEARCH METHODOLOGY

Subjects

In the first phase of the study teachers working in 13 areas of vocational education in the State of Mississippi in the fall of 1973 were requested to evaluate the effectiveness of their preservice training for preparing them to execute 94 specific performance tasks in vocational instruction. From this population, 250 teachers who had taught for three years or less were selected to participate in the study of work values and attitudes held by vocational teachers. One hundred and seventy-eight classroom teachers from this group completed all of the questionnaires and returned them to the investigators. These teachers comprised the sample for this last phase of the study. The sample consisted of approximately 71 percent of the classroom teachers who evaluated their teacher preparation programs in the first phase of this study.

The teachers completing the third phase of the study had the following distribution according to service areas: Agriculture, 19; Business and Office Careers, 4; Consumer and Homemaking, 46; Cooperative Education, 20; Disadvantaged, 11; Distributive Education, 9; Guidance, 1; Handicapped, 1; Industrial Arts, 23; Occupational Orientation, 10; Technical Education, 2; Health, 0; and Trade and Industrial Education, 32.

The subjects had received their preservice training primarily in college programs featuring teacher education curriculum. One hundred and forty-five were graduates of such programs. Twelve of the teachers

had studied only in non-credit workshops and 15 others had studied in college in programs other than teacher education. Three of the instructors had received no preservice education at all, and three had studied in some other type of program.

In education level, three of the subjects were certified by the General Educational Development Test (GED). Twenty had received only high school diplomas; 11 had received Associate of Arts or Science Degrees; 132 had earned Baccalaureate Degrees; 10 held Masters Degrees and two of the subjects held other certifications.

The subjects studied at a number of institutions, with nearly half of the sample having done their work at Mississippi State University. A breakdown of the schools and the number of their alumni in the study are as follows: Alcorn A & M, 19; Delta State College, 12; Jackson State College, 3, Mississippi State College for Women, 10; Mississippi State University, 78; Mississippi Valley State College, 0: University of Mississippi, 7; University of Southern Mississippi, 34; State Division of Vocational Education Workshops, 3; Other, 12.

Instruments

Three instruments were utilized for data collection: (1) the Preservice Teacher Education Questionnaire (PTEQ), (2) the Work Value Inventory by Super[13] and (3) the Vocational Teacher Attitude Scale

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13. D. E. Super, Manual for Work Values Inventory (Boston: Houghton Mifflin Company, 1970).

(VTAS) developed by the investigators. A copy of the VTAS is included in the appendix of this report.

The Preservice Teacher Education Questionnaire, also described in the first part of this study, elicited the teachers' perceptions of their preparation for teaching. The 94 performance tasks evaluated by the teachers on the PTEQ were grouped under nine subscales and an average rating for teacher preparation in each area was computed. The subjects rated their preparation for each performance task on five levels. The levels of competence were described as follows: Level 5, Competent Performance - the subject is able to demonstrate desired task performance independent of direction or assistance from others; Level 4, Capable Performance - the subject is able to demonstrate desired task performance when provided some direction or assistance; Level 3, Adequate Performance - the subject is able to demonstrate desired task performance when provided considerable direction or assistance; Level 2, Acceptable Performance - the subject is able to demonstrate desired task performance when provided constant direction or assistance; Level 1, Inadequate Performance - Subject is unable to demonstrate the desired task at the most elementary level even when provided constant direction or assistance; Level 0, No training in task area - area was not included in preservice education programs of subjects. The average rating for subjects on each subscale was computed by adding the total rating for the subscale and dividing the total by the number of items included in that particular subscale.

To secure a measure of internal consistency for the subscales, an alpha coefficient was computed for the nine subgroups. The alpha

coefficients for the subscales ranged from .82 to .95, indicating that a satisfactory internal relationship for evaluations of performance tasks existed within each of the respective subscales. Coefficients for specific subscales are given in Table I.

Table I. Internal Consistency of Subscales for the Preservice Teacher Education Questionnaire.

Subscale	No. of Items	Alpha Coefficient
Planning for Instruction	8	.85
Execution of Instruction	31	.95
Evaluation of Instruction	10	.91
Guidance	8	.89
Management	11	.90
Public and Human Relations	6	.83
Professional Role	7	.82
Student Vocational Organizations	7	.94
Program Coordination	6	.95

Another instrument, the Vocational Teacher Attitude Scale (VTAS) was developed by the investigators to assess the vocational teachers' attitudes toward teaching as a job and their attitudes toward students. The two subscales of the VTAS, the description of Teaching Index and the Student Description Index, were found to have alpha coefficients of .88 and .94, respectively, in an earlier study[14] where 83

14. H. M. Handley, "Job Satisfaction Among Teachers," (Mississippi State University: Unpublished Manuscript, 1972).

experienced teachers from all academic disciplines were administered the instrument. In a validity cross-check with the Purdue Teacher Opinionnaire in the pilot study, the Description of Teaching Index was found to be significantly correlated with the "Satisfaction with Teaching" subscale of that instrument (.83). The Student Description Index was also significantly correlated with the same scale of the Purdue Teacher Opinionnaire (.81).

The two indexes of the VTAS consisted of separate semantic differential type of scales in which the subjects were asked to state whether 18 words or phrases described their teaching job or students, respectively. The subjects indicated their response by circling "Y" for yes, "N" for no and "?" for undecided. The items for the subscales were adapted from checklists given by Smith[15] in her Cornell studies and Ryans[16] in his classical study of characteristics of teachers.

Directionality for scoring items on the subscales of the VTAS was established on the basis of the earlier study in which teachers from all academic disciplines participated. In that study some of the words or phrases of the semantic differential scales were found to load positively with expressed job satisfaction of teachers. Others were found to load negatively in regression analysis with external criteria for measuring job satisfaction. Each item,

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15. P. C. Smith, "The Development of a Method of Measuring Job Satisfaction: The Cornell Studies," From E. A. Fleishman, Studies in Personnel and Industrial Psychology (Homewood, Illinois: The Dorsey Press, 1967) pp. 347-348.

16. D. G. Ryans, Characteristics of Teachers, op. cit., pp. 220-224.

consequently, was scored on a scale form 3 to 1, with "3" meaning a positive attitude, "2" meaning a less positive attitude, ("?") and "1" meaning a least positive attitude. In some instances a "no" response by a subject on an item indicated a very positive attitude toward teaching or students. The directionalities for scoring items in the subscales are noted in the appendix. The subject's score on positive attitudes toward teaching as a job and his positive attitudes toward students, respectively, was obtained by adding the total points assigned each subscale for the 18 items.

Test-retest reliability coefficients were also calculated for the subscales of the VTAS in the earlier study. For this computation pretest and post measures were taken for the same subjects over a two week interim. A test-retest reliability coefficient of .92 was found for the Description of Teaching Indexes, and a coefficient of .88 was calculated for the Student Description Index.

Super's Work Value Inventory was the instrument employed in the study to measure the goals which motivated the vocational educators in their teaching jobs. According to Super[17], the instrument assesses the values which are extrinsic as well as those which are intrinsic in work, the satisfaction which men and women seek in work, and the satisfaction which may be the concomitants or outcomes of work. The instrument measures motivation for work in fifteen areas or subscales: creativity, management, achievement, surroundings, supervisory relations, way of life, security, associates, esthetics, prestige,

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17. D. E. Super, Manual for Work Value Inventory, op. cit., p. 3.

independence, variety, economic returns, altruism and intellectual stimulation.

Gable and Pruzek[18] subjected the Work Value Inventory to factoral analysis in independent studies for validation and found that Super's grouping of items within subscales were reasonable and sufficient for describing the relationships advanced by the author. In general, they also find the same factors reported by Hendrix and Super.[19] Even though all of the 15 subscales were not found to be independent of each other, they did possess internal consistency.

Collection and Analysis of Data

The three instruments were mailed in two separate packets to the vocational teachers who served as subjects for the study. The Preservice Teacher Questionnaire was mailed at the end of the fall term of 1972 in the first phase of the study. The Work Value Inventory and Vocational Teacher Attitude Scale were mailed a month later.

The instruments were handscored and data were analyzed by utilizing the Univac 1106 computer in the Computer Center at Mississippi State University. To find answers to the proposed questions the data were analyzed by utilizing three different multivariate statistical programs: least squares of analysis of

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18. R. K. Gable and R. M. Pruzek, "Super's Work Values Inventory: Two Multivariate Studies of Interitem Relationships," The Journal of Experimental Education (Fall, 1971) pp. 41-50.

19. V. L. Hendrix and D. E. Super, "Factor Dimensions and Reliability of the Work Values Inventory," Vocational Guidance Quarterly (Volume 17, 1968) pp. 269-274.

variance, multiple regression and canonical correlation. Each of these procedures will be discussed briefly as they apply to specific questions when the data are presented in this report. The .05 level of significance was utilized for rejecting null hypotheses structured in the study.

III. RESULTS

Attitudes and Values Held by Vocational Teachers

Preliminary to answering the research questions, it was decided to give a descriptive analysis of the work values and attitudes held by vocational teachers from the Mississippi sample as a composite group. In Table II below are given the means and standard deviations for the attitudes of the teachers toward their jobs and their students as measured by the Vocational Teacher Attitude Scale. For comparative purposes, measures derived when these same scales were administered by Handley[20] to a sample of Mississippi teachers from academic areas other than vocational are also given.

Table II. Means and Standard Deviations for Two Teacher Groups on Description of Teaching and Student Description Indexes of VTAS.

Teacher Groups	Attitude Toward Teaching	Attitude Toward Students
Vocational Teachers		
Means	46.96	43.05
S. D.	5.39	8.16
Other Teachers		
Means	46.21	47.11
S. D.	4.88	5.44

20. H. M. Handley, "Job Satisfaction Among Teachers," op. cit., p. 4.

The means and standard deviations for work values measured for the vocational teachers in this study are given below in Table III.

Table III. Overall Means and Standard Deviations of Work Value Measures for Vocational Teachers.

Work Value	Mean*	S. D.
Creativity	12.53	2.10
Management	10.61	2.39
Achievement	13.67	1.66
Surroundings	12.79	1.96
Supervisory Relations	13.65	2.02
Way of Life	13.48	1.79
Security	12.34	2.46
Associates	10.92	2.44
Esthetics	10.62	2.76
Prestige	11.67	2.46
Independence	12.58	2.40
Variety	11.84	2.29
Economic Returns	12.90	2.26
Altruism	13.78	1.99
Intelligence	12.61	2.13

*Maximum possible score = 15.00

Though norm data were not sufficient for precisely comparing the attitudes of the vocational teachers toward teaching and toward students with those of teacher groups from other academic areas, it

appears that the young vocational teachers may have been somewhat more critical of their students than were more experienced teachers from other phases of the school program. As observed in Table II, the vocational teachers not only rated their students less positively, but they also seemed to vary more in their ratings of students on the student description measure than did the other teachers. A standard deviation of 8.16 was found in the vocational group while the other teachers group had a standard deviation of 5.44. As observed by comparing the means of the two teacher groups in their attitudes toward teaching, however, little difference was noted. The vocational teachers gave their attitudes toward teaching a rating of nearly 47 points out of a possible 54, and the other teachers rated their feelings toward teaching at only 0.7 of a point less.

No specific conclusions were drawn from this analysis of attitudes held by the vocational teachers as a whole, except that closer study of the attitudes of vocational teachers toward students, as compared to teachers in other fields, may be indicated for researchers at a later time.

In studying Table III, it should be noted that motivators related to creativity, achievement, surroundings, supervisory relations, way of life, security, independence, economic returns, altruism and intelligence, were considered "important" in their work by the vocational educators. (A score of 12.0 indicates that the group considered the values "important"; a score of 15.0 indicates "very important.") Values of management, associates, esthetics, prestige and variety were considered less important. The vocational teachers,

then, were less attracted to the aspects of their jobs which relate to planning of work for others, to working only with those whom they like personally, to providing beauty, to giving prestige and to providing variety. They were most highly motivated by (1) altruism, the sense of doing good for other; (2) achievement, developing a sense of accomplishment and (3) supervisory relations, working under a supervisor who is fair and with whom they can get along.

Comparison of Values Among Teachers in Different Areas of Vocational Education

To find an answer to the question of how vocational teachers in different areas compare in their work values and the attitudes which they hold toward their jobs and students, the subjects' responses on the Work Value Inventory and the Vocational Teacher Attitude Scale were studied by the use of a least squares analysis of variance program developed by Harvey[21]. This program allowed the investigators to compare the means of these affective measures for the vocational groups from differnet disciplines, even though the groups consisted of unequal sample sizes. Means reported in the data, then, were "adjusted" means since a control for the sample size differences has been predicted and built into the analysis. Even with this adjustment, however, subjects from five preparation areas (business and office, guidance, handicapped, health and technical education) were eliminated from the study since the samples contained so few people from these

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21. W. R. Harvey, Least-Squares Analysis of Data with Unequal Subclass Numbers (Washington, D. C.: U. S. Department of Agriculture, Agricultural Research Service, Pamphlet # ARS 20-8, July 1968) p. 158.

Table IV: Comparison of Means for Vocational Teacher Groups on Work Value Measures.

Attitudinal Measure	TEACHING AREA MEANS								
	AGRI (N=19)	Consumer and Homemaking (N=46)	COOP ED (N=20)	Disadv. (N=11)	DE (N=9)	IA (N=23)	Occupational Orientation (N=10)	T&I (N=32)	F
Altruism	13.84	14.04	14.75	13.55	14.00	13.83	13.50	13.41	.44
Esthetics	11.11	11.00	9.05	10.55	9.67	11.00	9.70	10.87	1.71
Creativity	12.63	12.33	11.40	13.09	13.11	12.91	12.20	12.66	1.39
Intellectual Stimulation	12.68	12.13	13.60	13.00	13.11	12.83	12.70	12.81	.48
Achievement	13.53	13.63	13.30	13.09	13.89	14.35	13.20	13.66	1.06
Independence	13.00	12.35	14.65	12.64	13.67	12.57	11.90	12.25	.92
Prestige	12.53	11.04	12.90	11.91	12.33	12.09	11.70	11.53	.59
Management	11.63	9.57	10.50	10.64	11.33	10.48	10.50	11.25	2.38
Economic Returns	12.74	12.54	15.00	13.27	12.44	13.39	13.50	12.66	1.08
Security	12.84	11.80	12.20	13.36	10.56	12.43	12.90	12.72	1.57
Surroundings	12.58	12.65	12.15	13.00	12.67	13.87	12.80	12.41	1.78
Supervisory Relations	13.42	13.59	13.70	14.09	13.67	13.91	14.00	13.16	.45
Associates	11.37	10.26	10.75	12.00	11.22	10.78	11.30	11.00	1.07
Way of Life	13.58	13.72	13.15	12.64	13.22	13.48	13.50	13.31	.67
Variety	14.89	11.85	12.35	12.27	12.22	11.87	12.20	11.37	.28

*F ≥ 2.30 (at 8 and 120 df) significant at .05 level.
**F ≥ 2.93 (at 8 and 120 df) significant at .01 level.

areas that the measures of central tendency appeared to be rather meaningless.

Means and F ratios indicating differences among groups of vocational teachers for work values are summarized in Table IV. The same data for the attitude measures of the VTAS are given in Table V.

Table V. Comparison of Means for Teacher Groups on Attitudes Related to Teaching and Students.

Teaching Area	Attitudinal Measures	
	Toward Teaching	Toward Students
Agriculture (N=19)	49.47	47.47
Consumer and Homemaking (N=46)	45.70	39.98
Cooperative Education (N=20)	45.35	43.55
Disadvantaged (N=11)	47.55	37.09
Distributive Education (N=9)	46.67	45.22
Industrial Arts (N=23)	47.04	42.65
Occupational Orientation (N=10)	45.50	39.80
T & I Education (N=32)	48.66	45.56
F Ratio	1.80	3.38**

**F $\geq$ 2.93 (at 8 and 120 df) significant at .01 level)

On the 17 affective measures taken, only two - attitudes toward students from the VTAS (.01 level) and the management subscale of the Work Values Inventory - indicated significant differences among in the analysis of variance model when null hypotheses predicting no significant differences on each of the measures individually were tested.

As shown in Table V, an F ratio of 3.38 was discovered for the attitudes toward student measure; and according to Ferguson[21] this value predicts a significant difference attributed by the variance among groups at the .01 level of confidence for more than 120 subjects and 9 groups compared. When Kramer's modification of Duncan's new multiple range test was computed as a post hoc test to discover where the specific difference existed, the teachers of Agriculture, Technical and Industrial, Distributive Education and Cooperative Education, were found to rate their students more favorable (significant at the .05 level) than did the teachers of disadvantaged students. Agricultural teachers also rated their students significantly higher than did teachers in consumer and homemaking and occupational orientation areas. In Table VI the data summarizing the Duncan's new multiple range test for attitudes toward students held among subjects from the different teaching areas are given.

Table VI. Results of Duncan's New Multiple Range Test Comparing Group Means for Attitudes Toward Students.*

Groups							
Agriculture	T & I	DE	Coop Ed.	IA	Consumer & Homemaking	Occ. Or.	Disadv.
47.46	45.55	45.21	43.55	42.65	39.98	39.80	37.09

*Means not underlined differ significantly from one another at the .05 level.

21. G. A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill Book Company, 1971) pp. 452-453.

When the differences predicted among vocational teacher groups for the management work value were further studied by the use of the post hoc test, the teachers in agriculture were found to rate management values as significantly more important variables as motivators in their jobs than did teachers in consumer and homemaking education. This difference may be able to be attributed to sex differences rather than work area differences since traditionally men teachers work in agriculture and women work in homemaking in Mississippi. No significant differences among other groups were discovered on the post hoc tests. Results of the post hoc test are given in Table VII.

Table VII. Results of Duncan's New Multiple Range Test Comparing Means for Management Work Values of Vocatioanl Teachers.*

Group Means							
Agriculture	DE	T & I	Disadv.	Coop. Ed.	Occup. Or.	IA	Consumer & Homemaking
11.63	11.33	11.25	10.63	10.50	10.50	10.48	9.57

*Means not underlined differ significantly from each other at the .01 level.

The directional hypothesis that vocational teachers from the different areas would have similar work values, then, seemed to be strongly supported by these data. Except for the difference in management motivational factors (and that is probably due to sex), no statistically significant differences were discovered among the groups. It appeared that vocational teachers, as a whole, were more alike than different on the factors that they value in employment.

Even though few significant differences among teacher groups were indicated for the measures of attitudes and work values, a profile of affective measures for teachers in each subject area was prepared for descriptive purposes. In this analysis, it was determined whether the vocational educators in each of the teaching areas ranked in the upper quartile, semi-innerquartile or lower quartile ranges when group means were considered. Hopefully, this analysis would indicate some general relationships for the attitudes which tended to characterize each group.

Agriculture. The teachers in vocational agriculture, besides ranking first in their favorable attitudes toward students and their attraction to management facets of teaching, also ranked in the upper quartile in expressing favorable attitudes toward teaching. They also ranked in the upper quartile in their expressed attraction to esthetics, associates, way of life, variety and prestige as motivating factors in their work. They ranked in the lower quartile in supervisory relations as a motivating factor . In the other measures, they ranked in the semi-inner quartile range. Agriculture teachers, then, tended to think well of their jobs and students.

The teachers in agriculture were attracted to the parts of their jobs which allowed them to contribute beauty, to gain standing in the sight of others, to plan work for others, to work with people whom they like, to live their own life style and to work at a variety of different jobs. They were less concerned about their relationships with supervisors.

Consumer and Homemaking Education. Teachers in the vocational

area of consumer and homemaking education were least motivated by management values in their jobs. They also ranked in the lower quartile when their group was compared with groups of teachers in other vocational areas for the motivational influence of intellectual stimulation, prestige, economic returns and security found in their jobs. They ranked among the top groups in claiming altruism and esthetics as important work values for them. They ranked similar to all of the other groups in the areas of creativity, achievement, independence, surroundings and supervisory relations.

Cooperative Education. This group of vocational teachers gave a "very important" rating to economic returns as a motivating factor for work. They were also interested in the aspects of work which give them opportunities for independence. They also ranked highest on this factor than any other group studied. To balance these factors, they also gave the highest rating to altruism--a desire to help others--that was discovered among the other groups. Prestige also rated as an important work influence for this group.

The cooperative education teachers were less interested in esthetics since they ranked lowest on this motivating factor. They also appeared to be slightly less concerned about working in favorable surroundings than were the other groups.

Disadvantaged. Teachers of disadvantaged in vocational programs ranked high in work values of creativity, security, surroundings, supervisory relations and associates. They ranked in the lower quartile in values associated with way of life, altruism and attitudes toward students. Hence, the main motivating factors which highly

characterized these teachers were opportunities to create new ideas of things, work which guaranteed job security, opportunities to work in pleasant surroundings, opportunities to work with supervisors who were fair and with co-workers whom they liked. They were less motivated by work that allowed them to live their own way. They expressed less need to help others as a motivating factor and gave less positive ratings in their attitudes toward students.

Distributive Education. These teachers rated the following work values as positive work values: creativity, intellectual stimulation, achievement, independence and management. They ranked in the lower quartile in the following areas of work motivation: esthetics, economic returns, and security.

Industrial Arts. Teachers in Industrial Arts ranked in the upper quartile in claiming the following work values as major motivators: esthetics, achievement and surroundings. They ranked in the lower quartile in expressed needs for management opportunities. On all other subscales they ranked in the semi-innerquartile range.

Occupational Orientation. Vocational teachers in the area of occupational orientation ranked in the upper quartile in the following work value areas: economic returns, security and supervisory relations; i.e., they were more motivated by concern for more pay, job security and having fair employers. They ranked in the lower quartile in expressing positive attitudes toward teaching, in giving positive ratings for students. They were less motivated by opportunities for creativity, intellectual stimulation, achievement and independence.

Technical and Industrial Education. Teachers in the T & I area

ranked in the upper quartile in expressed positive attitudes toward both teaching and students. They ranked in the lower quartile by their ratings of the motivational influence of the following factors in their jobs: altruism, independence, prestige, surroundings, supervisory relations and variety. On all other affective variables studied they ranged in the semi-inner quartile range.

Differences in Affective Measures Among Vocational Teachers When Grouped According to Type of Preservice Program

When the 178 subjects were subdivided into groups identifying them by the type of inservice preparation which they received, no significant differences in the affective measures of values and attitudes were indicated among the groups by the analysis of variance study. As shown in Table VIII no significant differences were found at the .05 level between groups whose members studied in college vocational preparation programs, those who studied in college non-teaching programs, those who took noncredit workshops, those who had no preservice preparation at all, or those who prepared in other types of programs.

In observing Table VIII there appeared to be little relationship between the type of program in which vocational teachers received their training and the affective responses which they indicated for work values and attitudes as measured by the selected instruments.

Table VIII. F Ratios Comparing Differences in Work Values Scores for Vocational Teacher Groups Receiving Different Preservice Training Programs.

Attitudinal Measures	F	Work Value	F
Attitude Toward Teaching	.50	Associates	.41
Attitude Toward Students	.64	Esthetics	.40
Creativity	.76	Prestige	.28
Management	.73	Independence	.22
Achievement	1.59	Variety	.73
Surroundings	1.05	Economic Returns	.35
Supervisory Relations	.07	Altruism	.88
Way of Life	.59	Intellectual Stimulation	.30
Security	.39		

$F \geq 2.45$ required for significance at .05 level (df 4 and 169).

Relationship of Preservice Preparation to Work Values of Vocational Teachers

Are the work values held by young vocational education teachers related to their perceptions of their preservice teacher preparation? A canonical correlation analysis was employed to determine if a relationship existed between these two sets of variables. The canonical correlations were calculated between the 15 work value measures of the WVI and the nine subscales scores measuring preparation for teaching on the Preservice Teacher Questionnaire.

First, each set of the two measures were inner-correlated. No substantial intercorrelations were found to exist between the fifteen work values and the nine areas of preservice preparation. The highest correlations, as observed in Table IX, were discovered between

Table IX. Innercorrelation Matrix of Work Values Held by Vocational Teachers and Their Perceptions of Preservice Preparation.

Work Values	JOB PERFORMANCE TASKS								
	Planning of Instruction	Execution of Instruction	Evaluation	Guidance	Management	Public Relations	Prof. Role	Student Org.	Coordination
Creativity	.12	.19	.12	.21	.14	.23	.20	.25	.19
Management	.12	.21	.12	.14	.12	.18	.13	.20	.21
Achievement	.14	.25	.18	.21	.16	.26	.17	.16	.21
Surroundings	.11	.23	.09	.14	.20	.18	.17	.17	.19
Supervisory Rel.	.15	.30	.09	.08	.12	.19	.16	.15	.12
Way of Life	-.02	.10	.04	.05	.09	.07	.02	.07	.06
Security	.13	.20	.06	-.04	.10	.12	.09	.09	.16
Associates	.01	.14	.05	.17	.14	.08	.04	.12	.20
Esthetics	-.01	.11	.02	.04	.13	.12	.10	.07	.07
Prestige	.11	.19	.13	.14	.13	.22	.20	.28	.28
Independence	.06	.18	.09	.10	.11	.15	.16	.16	.21
Variety	.02	.10	.03	.07	.04	.10	.03	.09	.07
Economic Returns	.10	.14	.08	.07	.06	.01	.03	-.02	.10
Altruism	.08	.09	.06	.10	.06	.10	-.02	.00	.05
Intellectual Stim.	.05	.19	.15	.18	.12	.15	.12	.16	.20

preparation for working with student organizations and prestige values (.28) and preparation for program coordination and prestige (.28).

The canonical analysis, however, indicated significant multiple correlations for three of the nine possible independent multiple relationship among the two sets of variables. In canonical analysis, according to Van de Greer[22] the number of canonical functions is equal to the smaller number of variables in the smaller set to be correlated. In this case, nine possible relationships were plotted. The first three canonical correlations which were found to be significant are presented in Table X.

Table X. First Three Canonical R's and Associated Tests of Significance for Relationship of Work Values to Preservice Preparation of Vocational Teachers.

Canonical Function	1	2	3
Roots	0.2734	0.1704	0.1344
Canonical R	0.5231	0.4127	0.3666
Chi Square	53.8048	31.4734	24.3175
df	17	15	13
Probability	0.0001	0.0084	0.0294

22. J. P. Van de Geer, Introduction to Multivariate Analysis for the Social Sciences (San Francisco: W. H. Freeman and Company, 1971) pp. 157-170.

The root for the first canonical variate was .2734, which is the square of the first canonical correlation (.52), between the work values held and the teachers' perceptions of their professional preparation. This root may be interpreted as the proportion of the total variation "explained" by the first canonical function. The first canonical function, then, yielded a correlation of .53 between teacher preparation as perceived by the teachers and the work values held by these teachers. The correlations between teacher preparation areas and the first canonical axis are presented in Table XI. Correlation between work value measures and this same axis are given in Table XII.

Table XI. Correlation Between Preservice Preparation Areas and the Canonical Axes

Preparation Area	Function* 1	2	3
Planning for Instruction	(0.54)	0.30	-0.13
Execution of Instruction	-0.14	0.21	0.16
Evaluation of Instruction	-0.43	-0.44	-0.07
Guidance	(0.61)	0.49	(0.71)
Management	-0.25	0.06	0.19
Public Relations	-0.04	0.05	(-0.53)
Professional Role	0.00	(-0.66)	0.06
Student Voc. Organ.	0.26	0.30	0.08
Coordination	(0.55)	0.21	0.05

*Those areas which are above the criterion of .50 for coorelation with the canonical function are indicated in parentheses.

Table XII. Correlations Between Work Values and the Canonical Axes.

Work Values	Function* 1	2	3
Creativity	0.11	0.24	0.15
Management	(0.67)	(0.50)	0.38
Achievement	0.24	0.43	0.41
Surroundings	(0.55)	(0.78)	0.42
Supervisory Rel.	0.45	(0.74)	0.09
Way of Life	0.25	(0.52)	0.19
Security	-0.15	(0.76)	0.32
Associates	-0.04	0.40	-0.10
Esthetics	0.14	0.47	(0.71)
Prestige	0.12	0.11	0.16
Independence	-0.06	0.05	0.11
Variety	-0.02	0.24	0.26
Economic Returns	0.04	0.19	0.18
Altruism	0.05	-0.07	-0.04
Intellectual Stimulation	0.08	0.14	0.13

*Those factors above the criterion of 0.50 are indicated by parentheses.

In identifying factors which make the more important contributions to the strength of the canonical relationship, only correlations which were equal or greater than .50 were considered in this study. Based on this criterion, work values related to management (.65) and surroundings (.55) compositely explained the work value contribution

to the canonical function adequately. (See Table XII).

As seen in Table XI, the most significant contributions to the correlation between the teacher preparation for job performance areas and the canonical function were planning for instruction (.54), guidance (.60) and program coordination (.55).

In interpreting the first canonical relationship, it appears that vocational teachers who rated opportunities for management and favorable work surroundings tended to rate their preparation for instruction higher. They also felt that they were better prepared in the area of student guidance.

As observed in Table X, the second canonical function "explained" a little over 17 percent of the variation which occured in the variation among measures of values and teacher competence. A canonical correlation of .41 was indicated. An interpretation of this function, as given in Table XII, indicated that students who scored management, surroundings, supervisory relations, way of life and security as influential motivating factors in their jobs also felt better prepared to execute the tasks related to assuming their professional role. Teachers, then, who liked to plan work for others, who preferred favorable working surroundings, who preferred optimal supervising relationships, who liked to live their own life style and who were attracted to the security facets of their jobs also claimed to be better prepared for assuming an active role in professional organizations and working to advance the profession.

The third canonical function, as indicated on Table X explained over 13 percent of the relationship between the work values and the

evaluations of preparation for teaching. One of the work values, esthetics, and two of the preparation areas, guidance and public relations correlated over .50 with the canonical root. In explaining this function, it seemed that persons who were motivated by contributing beauty in their work also tended to rate their preparation for student guidance high and their preparation for public relations functions low.

In summary then, the canonical correlations indicated that significant relationships did exist among teachers' perceptions of their preparation for teaching and the work values which they held. Approximately 57 percent of the variance in one of the groups of measures appeared to be shared in common with the other group of measures. The relationship between the two sets of variables appeared to be very complex, however, and difficult to rationalize at the present state of knowledge.

Relationship of Preservice Preparation to Teacher Attitudes Toward Job and Students

To understand the relationship of preservice preparation of teachers to the attitudes which the vocational teachers held toward teaching, a multiple regression analysis was conducted, using the teacher preparation areas as predictors and attitudes toward teaching as measured by the VTAS as the criterion. Data from this analysis are summarized in Table XIII.

Table XIII. Relationship of Vocational Teacher Preparation in Specific Areas to Attitudes Toward Teaching.

Predictors (Teacher Performance Tasks)	R	R^2	Increase in R^2	F Ratio
Student Organizations	.25	.06	.06	11.37**
Execution of Instruction	.26	.07	.01	1.21
Total Model (All Variables)	.27	.07	.00	

**F ≥ 6.76 significant at .01 level (df 1 and 169)

In Table XIV the data summarizing the relationship between the teachers perceptions of their preparation for teaching in the difference performance areas and their attitudes toward students are given.

Table XIV. Relationship of Vocational Teacher Preparation in Specific Areas to Attitudes Toward Students.

Predictors (Teacher Performance Tasks)	R	R^2	Increase in R^2	F Ratio
Program Coordination	.19	.04	.04	6.75*
Execution of Instruction	.25	.06	.02	4.73*
Student Organizations	.30	.09	.03	5.12*
Public and Human Relations	.30	.09	.00	.63
Total Regression Model	.32	.10	.01	

*F ≥ 3.89 significant at .05 level (df 1 and 169)

As indicated by Table XIII, only a slight relationship existed between the vocational teachers perception of their preparation for

teaching and their attitudes toward students. When the ratings of their preparation for teaching were used as predictors of their attitudes, a multiple correlation of .27 was discovered;i.e., only about seven percent of the variance among the predictors and criterion were found to be common. The only significant relationship observed was that teachers who claimed to be well prepared for working with student vocational organizations also had a high opinion of teaching.

A multiple correlation of .32 was found between teachers' perception of their preparation for professional work in all performance areas and their attitudes toward students. Though the relationship must be considered modest, teacher ratings of their preparation in three areas were found to be significant predictors of attitudes toward students. These areas were program coordination, execution of instruction and working with student vocational organizations. Teachers who were more pleased with their preparation for these responsibilities also reflected more positive attitudes toward students.

To summarize the data describing relationships between teacher attitudes toward teaching and students and their feelings about their preparation for teaching, only modest though statistically significant multiple correlations among the variables were discovered. Those who professed good preparation for working with student organizations, however, did give a higher opinion of students and teachers. Those well prepared for program coordination and execution of instruction also rated their students higher.

Relationship of Work Values and Teacher Attitudes Toward Teaching and Students

How well do the work values held by vocational teachers predict the general attitudes which they hold toward their work and toward their students?

On two separate multiple regression models the 15 work value subscales measured on Super's instrument were correlated with the job descriptions and student descriptions given by the subjects on the Vocational Teacher Attitude Scale. As indicated in Table XV, a multiple correlation of .45 was found between the teachers' attitudes in describing their jobs and the work values which they hold. Similarly, as seen on Table XVI, a multiple correlation of .39 was discovered between the teachers' expressed attitudes in describing their students in a favorable manner and the work values which they held as measured by the Work Value Inventory.

Table XV. Multiple Correlation of Work Values Held by Vocational Education Teachers with Their Attitudes Toward Teaching (ATT).

Work Values	R	Increase in RSQ	F
Prestige	.160	.026	4.63*
Surroundings	.279	.052	9.93**
Altruism	.318	.023	4.49*
Way of Life	.350	.022	4.28*
Variety	.373	.016	3.25
Creativity	.394	.016	3.24
Total Model	.450	.202	

*F ≥ 3.90 (df 1 and 177) sign at .05 level.
**F ≥ 6.78 (df 1 and 177) sign at .01 level.

When the teachers' attitudes toward their job as measured in the job description subscale of the VTAS were correlated with the 15 work values in the regression model, four work values were found to have statistically significant relationships with the teachers' attitudes toward their job. The work values of prestige, surroundings, altruism and way of life were found to predict a significant amount of the variance found in the job attitude ratings. As observed on Table XV, prestige and altruism were positively correlated with the teachers' attitudes toward their jobs; surroundings and way of life values were negatively correlated with the same measures. Teachers who expressed more positive attitudes toward their jobs tended to value work which gave them higher standing in the eyes of others and which gave them opportunity to do well for others. They were less likely to express a need for work which allowed them to live their life in their own way, according to their own style. Teachers who thought well of their jobs were also less likely to value the importance of working in pleasant surroundings. They apparently were more interested in the function of teaching itself, rather than in its concomitants.

The four subscales of the Work Values Inventory which held significant relationships with the job attitudes of the teachers predicted 35 percent of the variance expressed by the teachers on the job description index. The total Work Values Inventory predicted 45 percent of this variance. None of the other work values individually explained a significant amount of variance in the job description measure.

When the teachers' ratings of their preparation for professional

work were correlated with their attitudes toward students, it was found that teachers who valued prestige and altruism as job motivators also tended to rate their students significantly higher. Teachers who held pleasant work surroundings important as a work motivator appeared to rate their students lower, as a whole. As observed in Table XVII, where simple correlations of work values with subjects' attitudes toward teaching and students are given, the relationship between the surroundings, work value and attitudes toward students was negative in direction. The three work values of prestige, altruism and surroundings all were significant predictors of the attitudes which the teachers in Vocational Education held toward students, and according to Table XVI, explained nearly 11 percent of the variance in the teachers' descriptions of their students on the VTAS subscale. None of the other work values measured in Super's instrument served as significant predictors alone.

Table XVI. Multiple Correlation of Work Values Held by Vocational Education Teachers and Their Attitudes Toward Students.

Predictors (Work Values)	R	Increase in R^2	F
Variety	.14	.020	3.65
Prestige	.29	.061	11.65**
Altruism	.32	.021	4.05*
Surroundings	.36	.024	4.83*
Total Model	.39	.155	

*F $\geq$ 3.90 (df 1 and 169) significant at .05 level.
**F $\geq$ 6.78 (df 1 and 169) significant at .05 level.

Table XVII. Simple Correlation of Work Values of Vocational Teachers with Favorable Attitudes Toward Teaching and Students.

Work Values	Attitudes Toward Teaching	Attitudes Toward Students
Prestige	.16	.13
Surroundings	-.12	-.10
Altruism	.15	.14
Way of Life	-.10	-.01
Variety	-.06	-.14
Creativity	.15	.01
Management	.02	.08
Security	.03	-.06
Economic Returns	-.12	-.09
Intellectual Stimulation	.13	.03
Achievement	.08	.05
Esthetics	.06	-.08
Independence	-.04	.00
Supervisory Relations	-.04	-.09
Associates	.06	.06

IV. SUMMARY AND CONCLUSIONS

An Overview

In this report data comparing the work values and attitudes which teachers in different vocational education programs hold toward teaching and students are presented. The subjects for the study consisted of 178 vocational educators who had been teaching three years or less in the spring of 1973. They were working in 12 different areas of vocational education.

In the study the selected noncognitive measures of teacher behavior were correlated with the educator's perceptions of their preservice preparation for teaching. In this analysis a composite rating for each subject's preparation for professional work was determined for nine performance areas: (1) planning of instruction; (2) execution of instruction; (3) evaluation of instruction; (4) guidance; (5) management; (6) public and human relations; (7) professional responsibilities; (8) student vocational organizations; and (9) program coordination. Then, these ratings were correlated with the attitudes which the teachers held toward teaching and toward students. The teachers' perceptions of their preparation to work in the nine areas were also correlated with the work values which the teachers selected as important in motivating them to work. Multivariate statistical techniques of analysis of variance, multiple regression and canonical correlation were utilized for data analysis.

The following generalizations were drawn from findings in the study:

(1) The vocational teachers, as a composite group were most highly motivated in their jobs by altruistic work values. They expressed a sincere desire to help others and found satisfaction in this pursuit in their jobs. They also expressed desires for personal achievement and working in situations where pleasant supervisory relations existed. The freedom to follow their own way of life was a strong motivating factor for the young teachers.

(2) The vocational educators, as a composite group , also claimed the following work values as less important in work motivation: management opportunities, working with friendly associates and having esthetic work opportunities.

(3) Vocational teachers from different disciplines differed significantly in the attitudes which they held toward students. Teachers in agriculture, for example, rated their students highest of any of the groups studied, and teachers working in disadvantaged programs rated their students lowest. The vocational educators, as a whole, expressed less satisfaction with their students than did a sample of experienced classroom teachers.

(4) When the 15 work values held by different groups of vocational teachers were compared, only one significant finding was indicated: teachers in agriculture rated management opportunities as more attractive motivators in their work than did educators in consumer and homemaking fields.

(5) No significant difference in attitudes toward teaching, or job satisfaction, were discovered among the groups of vocational educators studied.

(6) No differences in work values and attitudes were discovered among subgroups when the vocational educators were grouped according to the types of preservice preparation programs which they attended.

(7) The vocational educators' perceptions of their preparation for teaching in the nine performance areas were significantly related to the work values which the teachers held. Approximately 57 percent of the total variance in the ratings for performing instructional tasks could be "explained" by the work values which the teachers held. Three significant canonical relationships among the two sets of variables were discovered.

(8) The attitudes which the vocational teachers held toward teaching were significantly related to the teachers' perceived ability to work with vocational student organizations. Preparation in the other areas was not significantly related to this variable.

(9) The teachers' ability to coordinate vocational education programs, execute instruction and work with student vocational organizations were also found to be significantly related to the positive attitudes which teachers inferred toward students.

(10) A significant correlation was found when the work values held by the vocational educators, as a whole, were correlated with the teachers' attitudes toward students and teaching.

(11) Teachers who claimed prestige and altruism as important job motivators expressed more favorable attitudes toward teaching. The teachers who wanted to live freely, according to their own life style, and who were more concerned about working in comfortable surroundings gave less favorable descriptions of teaching as a job.

(12) Teachers who desired prestige in their jobs, who were motivated by the desire to help others and who were less concerned with the physical conditions of their work surroundings also expressed more favorable attitudes toward students.

Implications

Similarities in Work Values. Since the teacher groups studied appeared to be more alike than different in the work values which they held, the hypothesis predicting similar work values for teachers in vocational education, regardless of fields, was strongly supported. The groups also gave similar descriptions of their jobs on the semantic differential scales inferring that they also were not different in job satisfaction felt. Hence, a relative homogeneity among the groups on the motivational aspects of teaching as jobs appears to be indicated. These data lend support to the observation that young educators working in different vocational areas may have a relatively common set of work goals and job expectations.

Attitudes Toward Students. The groups of vocational educators diverged considerably in their description of students, indicating a wide range of attitudes from highly favorable to unfavorable. In comparison to descriptions of students given by teachers in fields other than vocational education, some of the vocational teachers rated their students very low. This appeared to be particularly true of those teachers working in programs for disadvantaged students. In contrast, teachers in agriculture, held high opinions of their students. Since teaching effectiveness has been highly correlated by

other investigators with the attitudes which teachers hold toward their students, this area of the study appears to warrant further investigation. Why are the attitudes of teachers working in some vocational areas toward students lower than those of teachers as a whole? What can teacher training institutions do to assist teachers in appreciating their students more?

Relationship of Teachers' Ratings of Preparation to Work Values Held. Over one half of the variance found in the teachers' self ratings of preservice preparation appeared to be found in common with difference in work values held by the teachers. These data may indicate that self ratings of teachers in evaluation studies are highly influenced by the values which the teachers hold. If alumni ratings are to be used for establishing the competency of preservice programs for training teachers, it should be remembered that these data are highly subjective--that the ratings given by the teachers for their ability to perform specific tasks may be as much related to their personal values as to their real preparation. On the other hand, the personal work values held by students should also be considered as professional training programs are prepared for them.

Relationship of Work Values to Job Satisfaction. Since the attitude measures derived from the Vocational Teacher Attitude Scale have been shown to correlate highly with job satisfaction measures, it may also be inferred that the work values held by the teachers were also related to their job satisfaction since a significant correlation was found between the two sets of attitudinal measures. This relationship needs more careful study since it would be useful in career

counseling for prospective teachers in vocational fields. Altruistic work values, or the desire to help others, for example, appeared to characterize the whole group. Only one real conflict was found in job responsibilities and work values and that was in the way of life area. Young teachers who expressed a strong desire to live their lives in their own way and who wished few restrictions from their jobs in this area also appeared to be less satisfied with teaching as a job. Teachers who were overtly concerned with the conditions of the physical aspects of their work surroundings also seemed to give less favorable opinions of teaching as a job. A sense of prestige also appeared to be important to teachers who were finding satisfaction in their jobs.

Complex Relationship of Attitudes to Professed Teaching Skills. The major implication of this study seems to be that there are significant relationships among noncognitive variables such as work values and the professed performance level of beginning teachers. These innerrelationship patterns are quite complex.

Even though studies of noncognitive variables that are important in the teaching process are still in their relative infancy, it appears that attitudes and values must be included in any investigations which ask teachers to evaluate their own competence.

Specific Recommendations

The investigators recommend:

(1) that the work values of pre-vocational teachers be studied by counselors and teachers so that the student can be given a more realistic picture of the compatibility of his personal motivators and

the conditions of his future job.

(2) that planners of programs in teacher training consider the personal work values of their students in structuring educational experiences.

(3) that further study be conducted on the attitudes of vocational teachers toward students. Factors related to teacher dissatisfaction with students must be identified and improvement in the condition be effected if optimum student motivation and achievement are to be realized.

(4) that program evaluators always include noncognitive variables in teacher preparation in conjunction with knowledge and skill developments in the criteria when they ask teachers to measure their own performance effectiveness.

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VI. APPENDIX

VOCATIONAL TEACHER ATTITUDE SCALE*

Part I: Job Description Index

INSTRUCTIONS: Below are listed 18 words or groups of words which have been used by individuals to describe their reactions to their jobs. Considering your overall reaction to teaching, decide whether each item describes your job.

If the item describes your teaching job, circle the "Y" to the right of it; if the item does not describe your job, circle the "N" and, if you are undecided, circle the "?".

Item	Reaction		
Fascinating	Y	N	?
Routine	Y	N	?
Satisfying	Y	N	?
Boring	Y	N	?
Good	Y	N	?
Creative	Y	N	?
Respected	Y	N	?
Hot	Y	N	?
Pleasant	Y	N	?
Useful	Y	N	?
Tiresome	Y	N	?
Healthful	Y	N	?
Challenging	Y	N	?
On your feet	Y	N	?
Frustrating	Y	N	?
Simple	Y	N	?
Endless	Y	N	?
Gives sense of accomplishment	Y	N	?

*Addendum. The choice marking the most favorable score on each item has been encircled.

Part II: Student Description Index*

INSTRUCTIONS: Below are listed 18 words or phrases which have been used by teachers to describe their reactions to their students. As a whole, does the item describe your reaction to students?

If you agree that the item describes your students, circle the "Y" to the right of it; if the item does not describe your students, circle the "N" and, if you are undecided, circle the "?"

Item	Reaction		
Stimulating	Y	N	?
Boring	Y	N	?
Slow	Y	N	?
Ambitious	Y	N	?
Stupid	Y	N	?
Responsible	Y	N	?
Fast	Y	N	?
Intelligent	Y	N	?
Easy to make enemies	Y	N	?
Talk too much	Y	N	?
Smart	Y	N	?
Lazy	Y	N	?
Unpleasant	Y	N	?
No privacy	Y	N	?
Active	Y	N	?
Narrow interests	Y	N	?
Loyal	Y	N	?
Hard to know	Y	N	?

*Addendum: The choice marking the most favorable score on each item has been encircled.